

AMENDMENTS TO THE CLAIMS

1. (Previously Amended) An ink jet printhead assembly, comprising:  
a heater chip including a backside with at least one cavity;  
a substrate associated with said backside of said heater chip, said substrate having a substantially flat surface opposing said at least one cavity; and  
5 adhesive at least partially disposed within said at least one cavity, said adhesive adhering said backside of said heater chip to said substantially flat surface of said substrate.
2. (Original) The printhead assembly of claim 1, wherein said at least one cavity comprises at least one trench.
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3. (Original) The printhead assembly of claim 2, wherein said heater chip includes at least one ink via.
4. (Original) The printhead assembly of claim 3, wherein said at least one trench substantially surrounds each said via.
5. (Previously Amended) The printhead assembly of claim 2, wherein said heater chip includes a plurality of ink vias, said adhesive being configured for preventing fluid  
communication between said plurality of ink vias in an area defined between said heater chip  
and said substrate. ~
6. (Original) The printhead assembly of claim 2, wherein said heater chip includes at least one outside edge, said at least one trench extending to said at least one outside edge to thereby form at least one vent.
7. (Original) The printhead assembly of claim 6, wherein said at least one vent is configured for allowing said adhesive to outgas during curing.

8. (Previously Amended) An ink jet printhead assembly, comprising:  
 a heater chip including a backside with at least one cavity;  
 a substrate associated with said backside of said heater chip, said substrate having a substantially flat surface; and

5 adhesive substantially entirely disposed within said at least one cavity, said adhesive } no  
 adhering said backside of said heater chip to said substantially flat surface of said substrate.

9. (Currently Amended) A heater chip assembly for use in an ink jet printhead, said heater chip assembly including:

a heater chip including a backside having at least one cavity; and

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 5 adhesive substantially entirely ~~disposed~~ contained within said at least one cavity, said } no  
 adhesive configured for adhering said backside of said heater chip to a substrate.

10. (Original) The heater chip of claim 9, wherein said at least one cavity comprises at least one trench.

11. (Original) The heater chip of claim 10, wherein said heater chip includes at least one ink via.

12. (Original) The heater chip of claim 11, wherein said at least one trench substantially surrounds each said via.

13. (Original) The heater chip of claim 10, wherein said heater chip includes at least one outside edge, said at least one trench extending to said at least one outside edge to thereby form at least one vent.

14. (Original) The heater chip of claim 13, wherein said at least one vent is configured for allowing said adhesive to outgas during curing.

15. (Currently Amended) A method of assembling an ink jet printhead, said method comprising the steps of:

micromachining at least one cavity in a backside of a heater chip, said heater chip including a plurality of vias, each of said at least one cavity surrounding a corresponding one of said plurality of vias, said at least one cavity being configured to reduce a width of a bond line between adjacent vias of said plurality of vias; and

adhering said backside of said heater chip to a substantially flat surface of a substrate such that adhesive is at least partially disposed within said at least one cavity.

16. (Previously Cancelled)

17. (Previously Amended) The method of claim 15, wherein said micromachining step includes cutting said at least one cavity into said heater chip.

18. (Previously Cancelled)

19. (Original) The method of claim 15, wherein said adhering step includes the substeps of:

dispensing said adhesive onto said substrate;

aligning said at least one cavity with said adhesive; and

pressing said heater chip and said substrate together.

20. (Original) The method of claim 15, wherein said at least one cavity comprises at least one trench.

21. (Original) The method of claim 20, wherein said heater chip includes at least one outside edge, said at least one trench extending to said at least one outside edge to thereby form at least one vent, said method comprising the further step of allowing said adhesive to outgas through said at least one vent during curing.

22. (New) An ink jet printhead assembly, comprising:

a heater chip having a backside, said heater chip including a plurality of vias and a plurality of trenches, each via of said plurality of vias surrounded by a corresponding trench of said plurality of trenches;

5 a substrate associated with said backside of said heater chip, said substrate having a substantially flat surface opposing said plurality of trenches; and

adhesive substantially entirely contained within each of said plurality of trenches, said adhesive adhering said backside of said heater chip to said substantially flat surface of said substrate, said adhesive sealing to completely prevent a flow of ink between said plurality of  
10 vias.

23. (New) The printhead assembly of claim 22, each trench of said plurality of trenches being configured to reduce a width of a bond line between adjacent vias of said plurality of vias.

24. (New) The printhead assembly of claim 22, each trench of said plurality of trenches and said adhesive configured to reduce a seal area between adjacent vias of said plurality of vias.

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